



Health Quality Ontario Long-Term Care Falls

Best Practices

Updated on November 30, 2015

“By changing nothing, nothing changes.”

Tony Robbins

Evidence-informed best practices are based on quality evidence and should be implemented into practice to optimize outcomes.⁶ Listed below you will find best practices graded according to the type of evidence. To view a description of the types of evidence, [click here](#).

Change ideas are specific and practical changes informed by experience and research that focus on improving specific aspects of a system, process or behaviour. To learn more about change ideas see the [QI: Getting Started tab](#).

A 2008 HQO analysis of falls and fall-related injuries in community-dwelling seniors examined the existing literature to identify interventions that may be effective in reducing the probability of a senior falling and/or sustaining a fall-related injury. Eleven interventions were identified in the literature, of which seven had some level of evidence to support their use in preventing falls and fall-related injuries.¹ These interventions have been shown to be cost effective.² For more details on the evidence found for each of these interventions, read the [Aging in the Community: Prevention of Falls and Fall-Related Injuries in Community-Dwelling Seniors](http://www.hqontario.ca/evidence/publications-and-ohac-recommendations/ontario-health-technology-assessment-series/aging-in-the-community-prevention-of-falls-and-fa) [http://www.hqontario.ca/evidence/publications-and-ohac-recommendations/ontario-health-technology-assessment-series/aging-in-the-community-prevention-of-falls-and-fa] report.

Listed below are best practices to reduce and prevent falls and related injuries. These are based on literature reviews of evidence for each practice. To help you move from best evidence to best practice, **click on the + button next to each best practice** to find implementation details, as well as change ideas that you can test using a PDSA approach.

Best practices need to be tailored to client characteristics. The Registered Nurses' Association of Ontario has created an [Implementation Toolkit](http://mao.ca/sites/mao-ca/files/RNAO_ToolKit_2012_rev4_FA.pdf) [http://mao.ca/sites/mao-ca/files/RNAO_ToolKit_2012_rev4_FA.pdf] to guide this process.

EVIDENCE-INFORMED BEST PRACTICES

Assess risk for falls

Make Change

| Evidence-Informed Best Practice | How To Implement | Toolbox |
|-------------------------------------|--|--|
| <p>Assess risk for falls</p> | <ul style="list-style-type: none"> Asses risk for falls at admission to Long Term Care Facility, and at regularly scheduled follow-up intervals Assess risk following a change in health status Assess risk following a fall <p>A range of risk factors influence whether people are likely to have falls, and should be considered in the assessment including:</p> <ul style="list-style-type: none"> Biological and medical Behavioural Environmental Social and Economic <p>Following each assessment develop an individualized Care Plan based on results of assessment</p> | <ul style="list-style-type: none"> Nursing Best Practice Guideline: Prevention of Falls and Fall Injuries in the Older Adult [http://rmao.ca/sites/rmao-ca/files/Prevention_of_Falls_and_Fall_Injuries_in_the_Older_Adult.pdf], Registered Nurses' Association of Ontario (RNAO) To read about risk factors that contribute to fall risk, go to pages 29-32 of Safer Healthcare Now!'s Falls Prevention Getting Started Kit [http://www.patientsafetyinstitute.ca/en/toolsResources/Pages/Falls-resources-Getting-Started-Kit.aspx] A repository of tools to assess Risk for Falls is available at the BC Injury Research and Prevention Unit's website [http://www.injuryresearch.bc.ca/] Regional Geriatric Program of Central Hamilton's Falls Assessment at Initial Visit Tool [http://admin.rgpc.ca/uploads/documents/7%20patient%20pre-assessment%20form%20-%20description%20of%20falls.pdf] |

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Assess Risk for Falls

Type of Evidence: IV (Expert Opinion)

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[\[http://www.crd.york.ac.uk/crdweb/ShowRecord.asp?ID=12007001303#_U201mP3jh9A\]](http://www.crd.york.ac.uk/crdweb/ShowRecord.asp?ID=12007001303#_U201mP3jh9A)

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[\[http://www.ncbi.nlm.nih.gov/pubmed/25641225\]](http://www.ncbi.nlm.nih.gov/pubmed/25641225)

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Supporting Research

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<http://www.patientsafetyinstitute.ca/en/toolsResources/Pages/Falls-resources-Getting-Started-Kit.aspx>

Review medications

Make Change

| Evidence-Informed Best Practice | How To Implement | Toolbox |
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| <p>Review medications</p> | <ul style="list-style-type: none"> • Avoid polypharmacy and use of psychotropic drugs and/or drugs that cause dizziness leading to falls (e.g., benzodiazepines) • Regularly consult with physician and pharmacist regarding medication-related risk of falls by reviewing and managing medications • Medication history should include identification of medication-related falls risk (e.g., drugs that cause dizziness and lead to falls) | <ul style="list-style-type: none"> • Reducing Falls and Injuries from Falls (Appendix B1 and Appendix B2, list of medications that may impact falls) [http://www.patientsafetyinstitute.ca/en/toolsResources/Pages/Falls-resources-Getting-Started-Kit.aspx], Safer Healthcare Now! |

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Review Medications

Type of Evidence: I (High)

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Review corrective vision and hearing aids

Make Change

| Evidence-Informed Best Practice | How To Implement | Toolbox |
|--|---|---------|
| Review corrective vision and hearing aids | <ul style="list-style-type: none">Regularly evaluate visual and aural acuityOptimize vision and hearing for residents by ensuring that they have the most appropriate corrective vision and hearing aids for their needs | |

References

Review Corrective Vision and Hearing Aids

Type of Evidence: II (Medium)

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Modify and optimize environmental factors to prevent falls

Make Change

| Evidence-Informed Best Practice | How To Implement | Toolbox |
|--|---|--|
| <p>Modify and optimize environmental factors to prevent falls</p> | <p>Establish falls prevention strategies by optimizing environmental factors: modify and remove environmental hazards:</p> <ul style="list-style-type: none"> • Ensure that residents wear safe footwear at all times • Use floor mats to cushion falls • Maintain low bed heights • Do not use bed rails • Install chair alarms • Minimize use of restraints • Minimize trip hazards (e.g., clean spills on the floor, remove clutter) • Design the physical environment to prevent falls (e.g., unobstructive furniture arrangement, ensure good lighting, make call bells easily accessible, remove trip hazards, etc.) <p>Clear identification of environmental risk factors:</p> <ul style="list-style-type: none"> • Discrete risk identifiers • Chair alarms • Eliminate trip hazards such as slippery floors and clutter <p>Conduct checking and monitoring to ensure prevention measures are implemented effectively:</p> <ul style="list-style-type: none"> • Environmental safety rounds • Inspection of mobility aids • Ensure completion of risk assessments, care processes, fall follow-up and care planning. • Feedback process about the falls prevention program <p>Regularly review causes and risks:</p> <ul style="list-style-type: none"> • Identify cause of any previous fall incidents (e.g. falls huddles, root cause analysis) and note if any change to the care plan is required | <ul style="list-style-type: none"> • A Sample Environmental Risks Assessment Checklist [http://www.patientsafetyinstitute.ca/en/toolsResources/Pages/Falls-resources-Getting-Started-Kit.aspx], from the Safer Healthcare Now! website (Appendix J, page 173) • To read about minimizing restraint use, read the Practice Standard for Restraints [http://www.cno.org/docs/prac/41043_Restrain ts.pdf], from the College of Nurses of Ontario |

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Modify and Optimize Environmental Factors to prevent falls

Type of Evidence: I (High)

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Use hip protectors for high risk residents

Make Change

| Evidence-Informed Best Practice | How To Implement | Toolbox |
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| Use hip protectors for high risk residents | <ul style="list-style-type: none"> Consider using external hip protectors for high-risk residents Remove or lessen barriers where possible to hip protector usage (e.g., cost, discomfort, skin irritation and appearance, and impact on dressing and toileting). SaferHealthCare Now!'s Getting Started Kit, page 67, suggests some strategies to address some of these barriers. | <ul style="list-style-type: none"> Reducing Falls and Injuries from Falls [http://www.patientsafetyinstitute.ca/en/toolsResources/Pages/Falls-resources-Getting-Started-Kit.aspx], Safer Healthcare Now! |

References

Use Hip Protectors for High Risk Residents

Type of Evidence: I (High)

REFERENCES:

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Santesso N, Carrasco-Labra A, Brignardello-Petersen R. Hip protectors for preventing hip fractures in older people. *Cochrane Database Syst Rev*. 2014 Mar 31;3:CD001255. Full-text available at: <http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD001255.pub5/full> [<http://onlinelibrary.wiley.com/doi/10.1002/14651858.CD001255.pub5/full>]

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Maximize use of mobility aids

Make Change

| Evidence-Informed Best Practice | How To Implement | Toolbox |
|---|--|---|
| <p>Maximize use of mobility aids</p> | <ul style="list-style-type: none"> • Appropriate use of mobility aids and assistive devices: “Loss of balance, trips or slips resulting in a fall are more likely to occur in unsafe environments or with equipment and assistive devices that are not properly maintained.” (Safer Healthcare Now!, Getting Started Kit, page 63) • Consider using outdoor gait stabilizing devices for mobile elderly in the winter to reduce falls • Regularly inspect mobility aids | <ul style="list-style-type: none"> • Reducing Falls and Injuries from Falls [http://www.patientsafetyinstitute.ca/en/toolsResources/Pages/Falls-resources-Getting-Started-Kit.aspx], Safer Healthcare Now! |

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Maximize Use of Mobility Aids

Type of Evidence: III (Low)

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Establish strength and balance exercise programs

Make Change

| Evidence-Informed Best Practice | How To Implement | Toolbox |
|--|--|---|
| <p>Establish strength and balance exercise programs</p> | <p>Implement long-term exercise programs in mobile seniors to reduce falls. Assess all residents for physical and functional abilities at admission and regularly review their status.</p> <ul style="list-style-type: none"> Use standardized assessment tools (e.g., Berg Balance Scale; Tinetti Gait and Balance Instrument; Timed Up and Go). | <ul style="list-style-type: none"> Reducing Falls and Injuries from Falls (Appendix B1 and Appendix B2, list of medications that may impact falls) [http://www.patientsafetyinstitute.ca/en/toolsResources/Pages/Falls-resources-Getting-Started-Kit.aspx], Safer Healthcare Now! <p>Some suggested tools to consider include:</p> <ul style="list-style-type: none"> Berg Balance Scale [http://www.veterans.gc.ca/eng/forms/document/437], Veterans Affairs Canada Tinetti Gait and Balance Instrument [http://geriatrics.uthscsa.edu/tools/TINETT_L.pdf], from the University of Texas Health Science Center |

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Establish Strength and Balance Exercise Programs

Type of Evidence: I (High)

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Prevent and treat osteoporosis. Provide calcium and vitamin D supplementation

Make Change

| Evidence-Informed Best Practice | How To Implement | Toolbox |
|--|---|--|
| <p>Prevent and treat osteoporosis.</p> <p>Provide calcium and vitamin D supplementation.</p> | <ul style="list-style-type: none"> Prevent: Screen for osteoporosis (age, low bone mineral density, height loss, history of falls, family fracture history) Treat: Provide calcium and vitamin D supplements for residents at high risk for osteoporosis and bone fracture. Improve bone density with exercise programs | <ul style="list-style-type: none"> Clinical Guidelines for the Prevention and Diagnosis of Osteoporosis [http://www.cmaj.ca/content/early/2010/10/12/cmaj.100771.full.pdf+html?ijkey=edc6c6048e7d4acdc41368fe3f1e622bf5a2deac&keytype=tf_ipsecsha] |

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Prevent and Treat Osteoporosis: Provide Calcium and Vitamin D Supplementation

Type of Evidence: I (High)

REFERENCES:

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Screen for cognitive impairment

Make Change

| Evidence-Informed Best Practice | How To Implement | Toolbox |
|---|---|--|
| <p>Screen for cognitive impairment</p> | <p>Screen for cognitive impairment (using tool such as the Mini-Mental State Exam [MMSE] or the Confusion Assessment Method instrument [CAM])</p> | <ul style="list-style-type: none"> • Mini-mental State Examination [http://www.veterans.gc.ca/eng/forms/document/171], Veteran Affairs • Confusion Assessment Form [http://seniorfriendlyhospitals.ca/files/Confusion%20Assessment%20Method_0.pdf], Senior Friendly Hospitals |

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Screen for Cognitive Impairment

Type of Evidence: IV (Expert Opinion)

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Supporting Research

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Implement individualized toilet routines

Make Change

| Evidence-Informed Best Practice | How To Implement | Toolbox |
|---|--|--|
| <p>Implement individualized toileting routines</p> | <ul style="list-style-type: none"> • Create individualized toileting plans • Ensure adequate hydration during the day • Limit fluid intake in the evening | <ul style="list-style-type: none"> • Voiding Record, found in Appendix D of Promoting Continence Using Prompted Voiding Best Practice Guideline [http://mao.ca/sites/mao-ca/files/Promoting_Continence_Using_Prompted_Voiding.pdf], Registered Nurses' Association of Ontario |

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Implement Individualized Toilet Routines

Type of Evidence: IV (Expert Opinion)

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Measurement

Updated on November 30, 2015

“Some is not a number, soon is not a time.”

Don Berwick, former CEO and President of IHI, December 2004, at launch of the 100,000 Lives Campaign

How will we know if a change is an improvement? Measurement is one of the critical steps in a quality improvement (QI) initiative that assesses the impact of your tests of change. **Quality indicators** are used to measure how well something is performing. There are three types of quality indicators used to measure your QI efforts: **outcome** (indicators that capture clinical outcomes and or system performance), **process** (indicators that track the processes that measure whether the system is working as planned), and **balancing** indicators (indicators that ensure that changing one part of the system does not cause new problems in other parts of the system).

| Type of Indicator | Indicator of Quality Improvement | How to Calculate: $\frac{\text{numerator}}{\text{denominator}}$ | Targets/ Benchmarks | How is This Indicator Used? |
|-------------------|---|--|--|--|
| Outcome | Percentage of residents who had a recent fall (in the last 30 days) | Residents who had a fall in the last 30 days recorded on their target assessment <hr/> Residents with valid assessments | <u>Targets:</u> As low as possible (set by individual organizations) <u>Provincial benchmarks:</u> 9% | Quality improvement QIP indicator Publicly reported by HQO |

Tools & Resources

Updated on November 30, 2015

“Knowledge derived from research and experience may be of little value unless it is put into practice.”

Dr. Judith Shamian, keynote address at the 11th International Nursing Informatics Conference, Montreal, 2011

Tools

Falls

- [Falls Prevention and Management Best Practices Toolkit \[http://mao.ca/bpg/guidelines/prevention-falls-and-fall-injuries-older-adult\]](http://mao.ca/bpg/guidelines/prevention-falls-and-fall-injuries-older-adult)
Registered Nurses' Association of Ontario (RNAO)
- [Morse Fall Scale \[http://rgp.toronto.on.ca/torontobestpractice/Morsefallscale.pdf\]](http://rgp.toronto.on.ca/torontobestpractice/Morsefallscale.pdf)
Regional Geriatric Program of Toronto
- [Practice Standard: Restraints \[http://www.cno.org/Global/docs/prac/41043_Restrains.pdf\]](http://www.cno.org/Global/docs/prac/41043_Restrains.pdf)
College of Nurses of Ontario
- [Confusion Assessment Form \[http://seniorfriendlyhospitals.ca/files/Confusion%20Assessment%20Method_0.pdf\]](http://seniorfriendlyhospitals.ca/files/Confusion%20Assessment%20Method_0.pdf)
Senior Friendly Hospitals
- [Reducing Falls and Injuries from Falls: Getting Stared Kit \[http://www.patientsafetyinstitute.ca/en/toolsResources/Pages/Falls-resources-Getting-Started-Kit.aspx\]](http://www.patientsafetyinstitute.ca/en/toolsResources/Pages/Falls-resources-Getting-Started-Kit.aspx)
Safer Healthcare Now!
- [Mini-mental State Examination \[http://www.veterans.gc.ca/eng/forms/document/171\]](http://www.veterans.gc.ca/eng/forms/document/171)
Veteran Affairs
- [Tinetti Balance Scale \[http://geriatrics.uthscsa.edu/tools/TINETTI.pdf\]](http://geriatrics.uthscsa.edu/tools/TINETTI.pdf)
School of Medicine, UT Health Science Center, San Antonio

QI Tools

- Communications Plan: [Instructions](#), [Tool](#)
- Fishbone Template: [Instructions](#), [Tool](#)
- Five Whys: [Instructions](#), [Tool](#)
- Measurement Plan Template: [Instructions](#), [Tool](#)
- Pareto Chart: [Instructions](#), [Tool](#)
- [PDSA Template](#)
- [Project Charter](#)
- [Tree Diagram Worksheet](#)

For a more comprehensive list of tools and resources, visit the following links on our HQO website:

- [HQO Tools and Resources \[http://www.hqontario.ca/quality-improvement/tools-and-resources/\]](http://www.hqontario.ca/quality-improvement/tools-and-resources/)

Resources

Falls

- [Canadian Fall Prevention Education Collaboration \[http://www.canadianfallprevention.ca/\]](http://www.canadianfallprevention.ca/)
- [Falls Prevention Resources \[http://www.ihl.org/explore/Falls/Pages/default.aspx\]](http://www.ihl.org/explore/Falls/Pages/default.aspx)
Institute for Healthcare Improvement
- [Ontario Osteoporosis Strategy \[http://www.osteostategy.on.ca/\]](http://www.osteostategy.on.ca/)
- Preventing Falls [Change Package \[http://www.hqontario.ca/portals/0/Documents/qi/rf-change-package-falls-en.pdf\]](http://www.hqontario.ca/portals/0/Documents/qi/rf-change-package-falls-en.pdf), [Poster \[http://www.hqontario.ca/portals/0/Documents/qi/rf-poster-falls-en.pdf\]](http://www.hqontario.ca/portals/0/Documents/qi/rf-poster-falls-en.pdf), and [Change Table](#)

[\[http://www.hqontario.ca/portals/0/Documents/qi/rf-change-table-falls-en.pdf\]](http://www.hqontario.ca/portals/0/Documents/qi/rf-change-table-falls-en.pdf)

Residents First, Health Quality Ontario

- [Prevention of Falls and Fall Injuries in the Older Adult](http://www.mao.org/Page.asp?PageID=924&ContentID=810) [<http://www.mao.org/Page.asp?PageID=924&ContentID=810>]
Registered Nurses' Association of Ontario (RNAO)
- [Required Organizational Practices Handbook 2012](http://www.accreditation.ca/sites/default/files/rop-handbook-2014-en.pdf) [<http://www.accreditation.ca/sites/default/files/rop-handbook-2014-en.pdf>]
Accreditation Canada
- [Seniors Fall Prevention](http://www.injuryresearch.bc.ca/quick-facts/fall-prevention/) [<http://www.injuryresearch.bc.ca/quick-facts/fall-prevention/>]
BC Injury Research and Prevention Unit
- [Preventing Falls: From Evidence to Improvement in Canadian Health Care](https://secure.cihi.ca/estore/productFamily.htm?locale=en&pf=PFC2707&lang=en&media=0) [<https://secure.cihi.ca/estore/productFamily.htm?locale=en&pf=PFC2707&lang=en&media=0>]

QI Resources

- [Interpreting Run Charts](#)
Health Quality Ontario
- [Model for Improvement \(Clip 1\)](http://www.youtube.com/watch?v=SCYghxtioY) [<http://www.youtube.com/watch?v=SCYghxtioY>]
Institute for Healthcare Improvement
- [Model for Improvement \(Clip 2\)](http://www.youtube.com/watch?v=6MlUqdulNwQ&feature=relmfu) [<http://www.youtube.com/watch?v=6MlUqdulNwQ&feature=relmfu>]
Institute for Healthcare Improvement
- [PDSA Cycle Video \(Part 1\)](http://www.youtube.com/watch?v=-ceS9Ta820&feature=youtu.be) [<http://www.youtube.com/watch?v=-ceS9Ta820&feature=youtu.be>]
Institute for Healthcare Improvement
- [PDSA Cycle Video \(Part 2\)](http://www.youtube.com/watch?v=eYoJxjmv_QI&feature=relmfu) [http://www.youtube.com/watch?v=eYoJxjmv_QI&feature=relmfu]
Institute for Healthcare Improvement
- [The run chart: a simple analytical tool for learning from variation in healthcare processes](http://www.ncbi.nlm.nih.gov/pubmed?term=%E2%80%A2%09The+run+chart%3A+a+simple+analytical+tool+for+learning+from+variation+in+healthcare+processes) [[http://www.ncbi.nlm.nih.gov/pubmed?term=%E2%80%A2%09The run chart%3A a simple analytical tool for learning from variation in healthcare processes](http://www.ncbi.nlm.nih.gov/pubmed?term=%E2%80%A2%09The+run+chart%3A+a+simple+analytical+tool+for+learning+from+variation+in+healthcare+processes)]
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Background

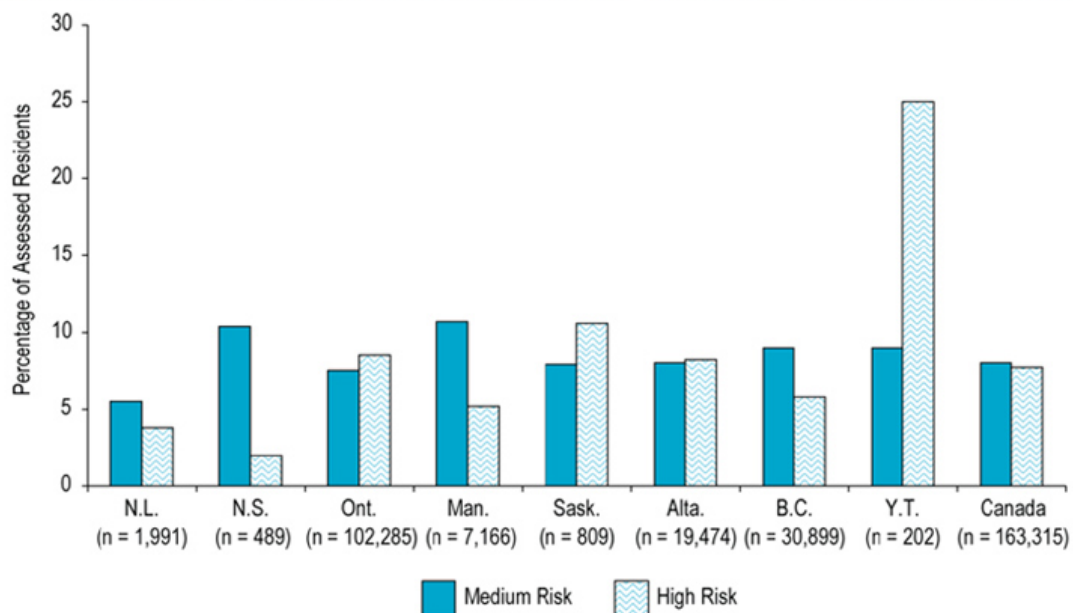
Updated on November 30, 2015

Issue

A **fall** is defined as an event or unintentional change in position that results in a person coming to rest inadvertently on the ground or floor or other lower level.^{1,2} Falls and fall-related injuries are among the most serious and common medical problems experienced by older adults. Even a fall that does not result in an injury can trigger a fear of falling, which can reduce a resident's mobility, social interactions, and quality of life.³

Health Quality Ontario reported on its public report Long-Term Care web page that in 2014-2015, 14.8% of long-term care residents had a fall in any given 30-day period, changing a little from 14.2% in 2013-2014.³ As well, approximately 25,000 people in residential care across Canada were at risk of falling.⁴

Figure 1. Percentage of Residential-Based Long-Term Care Clients at Risk of Falls, 2013-2014



Source: Home Care Reporting System, 2013-2014, Canadian Institute for Health Information

The good news is that some falls can be prevented. A growing body of research indicates that assessing risk and implementing prevention strategies are effective in reducing falls, thereby maintaining health outcomes and quality of life among seniors. According to the *Long-Term Care Homes Act, 2007*, all homes in Ontario are required to have a falls prevention and management program, so to enhance your program, you can find evidence informed best practices outlined in the [Best Practices tab](#) to support efforts to reduce falls in Ontario.

Call to Action

The overarching goal is to maintain and or improve the quality of life for long-term care residents by preventing and reducing the number and impact of falls, which in turn, will also lessen the burden on the health care system. There has been little to no change in the falls rate over the past several years,³ and the considerable variation in the rate of falls amongst long-term care homes suggests there is room for improvement and better consistency in Ontario's long-term care homes.³ The provincial target is to bring falls rates down as low as possible.

Ontario is the first jurisdiction that publicly reports on long-term care home specific quality indicators. As you may have already learned, being able to measure and monitor your efforts is one of the first steps in any quality improvement journey. While the tools and information provided in this quality improvement resource focus on the process of quality improvement for the home, the ultimate goal is to provide residents with the best possible care.

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Toronto: Registered Nurses' Association of Ontario (RNAO); 2005 Mar.

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2. Canadian Institute for Health Information. Resident Assessment Instrument (RAI) RAI MDS 2.0 User's Manual.

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4. Health Quality Ontario. Long-term care-Falls

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